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Idaho State  
Department of  
Agriculture

Soil  
Conservation  
Service



# Idaho

## Basin Outlook Report

### February 1, 1994





# Basin Outlook Reports and Federal - State - Private Cooperative Snow Surveys

For more water supply and resource management information, contact:  
Your local Soil Conservation Service Office

or

Soil Conservation Service  
Snow Surveys  
3244 Elder Street, Room 124  
Boise, ID 83705-4711  
(208) 334-1614

How forecasts are made

Most of the annual streamflow in the Western United States originates as snowfall that has accumulated high in the mountains during winter and early spring. As the snowpack accumulates, hydrologists estimate the runoff that will occur when it melts. Predictions are based on careful measurements of snow water equivalent at selected index points. Precipitation, temperature, soil moisture and antecedent streamflow data are combined with snowpack data to prepare runoff forecasts. Streamflow forecasts are coordinated by Soil Conservation Service and National Weather Service hydrologists. This report presents a comprehensive picture of water supply conditions for areas dependent upon surface runoff. It includes selected streamflow forecasts, summarized snowpack and precipitation data, reservoir storage data, and narratives describing current conditions.

Snowpack data are obtained by using a combination of manual and automated SNOTEL measurement methods. Manual readings of snow depth and water equivalent are taken at locations called snow courses on a monthly or semi-monthly schedule during the winter. In addition, snow water equivalent, precipitation and temperature are monitored on a daily basis and transmitted via meteor burst telemetry to central data collection facilities. Both monthly and daily data are used to project snowmelt runoff.

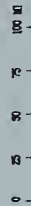
Forecast uncertainty originates from two sources: (1) uncertainty of future hydrologic and climatic conditions, and (2) error in the forecasting procedure. To express the uncertainty in the most probable forecast, four additional forecasts are provided. The actual streamflow can be expected to exceed the most probable forecast 50% of the time. Similarly, the actual streamflow volume can be expected to exceed the 90% forecast volume 90% of the time. The same is true for the 70%, 30%, and 10% forecasts. Generally, the 90% and 70% forecasts reflect drier than normal hydrologic and climatic conditions; the 30% and 10% forecasts reflect wetter than normal conditions. As the forecast season progresses, a greater portion of the future hydrologic and climatic uncertainty will become known and the additional forecasts will move closer to the most probable forecast.

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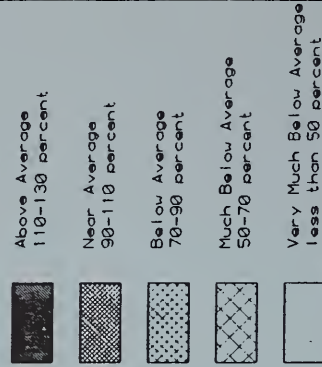
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## IDAHO MOUNTAIN SNOWPACK

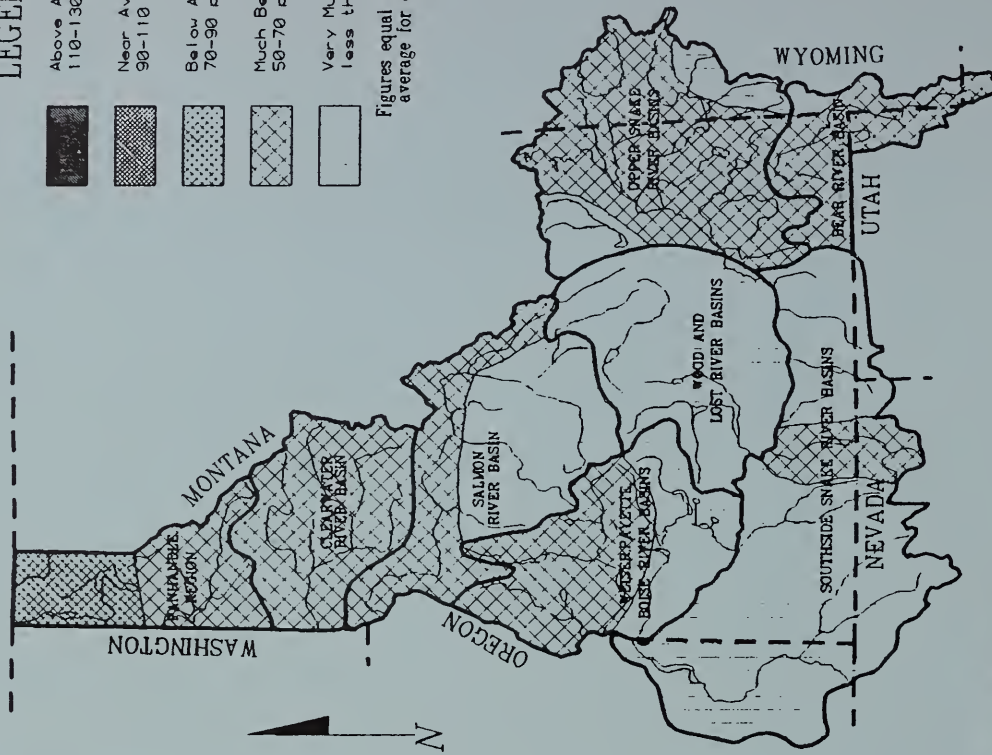
FEBRUARY 1, 1994



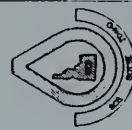
### LEGEND



Figures equal percent of average for drainage



SOIL CONSERVATION SERVICE  
U.S. DEPARTMENT OF AGRICULTURE



# **IDAHO WATER SUPPLY OUTLOOK REPORT**

***FEBRUARY 1, 1994***

## **SUMMARY**

A persistent ridge of high pressure established itself over Idaho during much of January, blocking most storm systems from the state. Consequently, January precipitation was below average, leaving snowpack conditions well below normal as of February 1. With more than half the winter season behind us, the prospect of normal runoff conditions this year is highly unlikely. Reservoir storage continues to be the bright spot in the water supply picture for 1994. Many southern Idaho reservoirs are reporting normal or above normal storage for the first time in many years. The water supply situation could be tight this year in many areas; water users are encouraged to check with their local irrigation districts for more specific information as the season progresses.

## **SNOWPACK**

The first week of the new year brought much-needed snowfall to Idaho, but dry conditions quickly returned for the remainder of the month. Snowfall was light throughout the state, leaving snowpacks below to well below normal as of February 1. Snowpacks currently range from 60 to 70% of average in northern Idaho, 40 to 65% in the central and southern mountains, and 50 to 60% in the upper Snake basin. With less than half of the snow accumulation season remaining, it is highly unlikely that this deficit can be overcome before the runoff season begins.

## **PRECIPITATION**

The new year started off with a bang, with several moist Pacific storms bringing much-needed moisture to Idaho during the first week of January. Unfortunately, the wet spell did not last long and was replaced by warm, dry weather for the majority of the month. Precipitation amounts were heaviest in the North with the Panhandle and Clearwater basins receiving 65 and 69% of normal, respectively, for January. Most of central and southern Idaho received only 40 to 60% of average precipitation for the month. Clear skies and warm temperatures dominated Idaho's weather during the middle of January. Stagnant inversions trapped fog and cold air in many southwestern valleys, but stations above the inversion layer reported very warm temperatures for mid-January. A return to wet, winter weather is needed to ensure an adequate water supply this summer!



## RESERVOIRS

Reservoir storage will be an important "savings account" for southern Idaho water users this year. With streamflow forecasts calling for only 50 to 70% of average runoff, reservoirs will play an important role in meeting irrigation demands. Currently, the Boise basin reports near average storage. The Payette and upper Snake reservoirs are reporting above average storage, with the upper Snake reservoirs combined storage currently 82% full. Panhandle reservoirs are generally below normal, while Dworshak reports above normal storage. Elsewhere, reservoir storage is quite variable, ranging from 37% of capacity for Bear Lake to 76% of capacity for the Little Wood. Irrigators and other water users should keep in touch with their local water districts for more information as the season progresses.

Note: SCS reports reservoir information in terms of usable volumes, which includes both active, inactive, and in some cases dead storage. Other operators may report reservoir contents in different terms. For additional information, see the reservoir definitions in the back of this report.

## STREAMFLOW

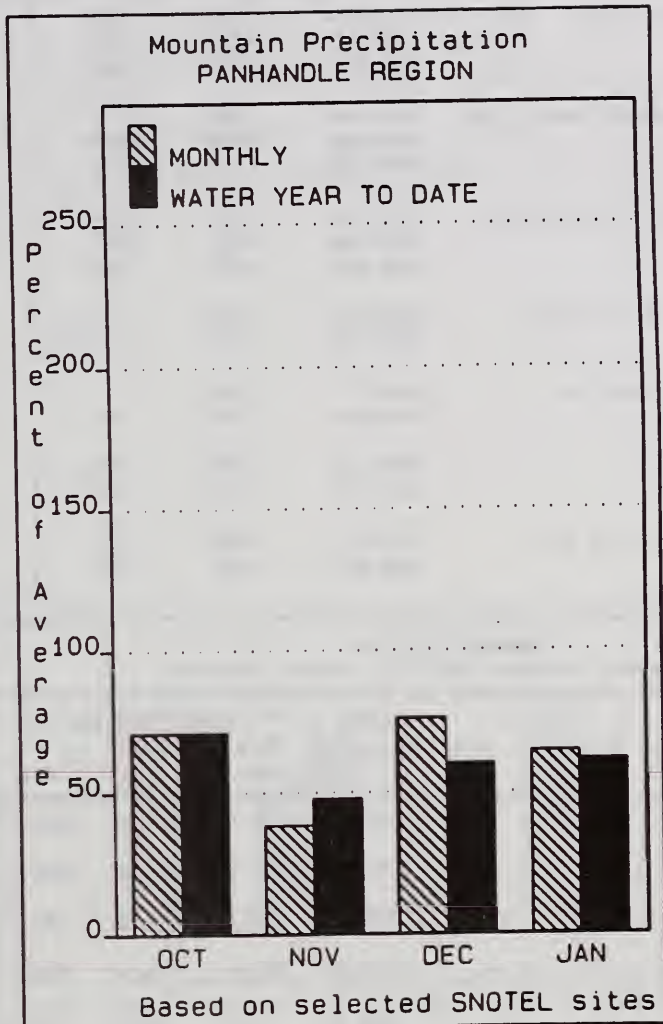
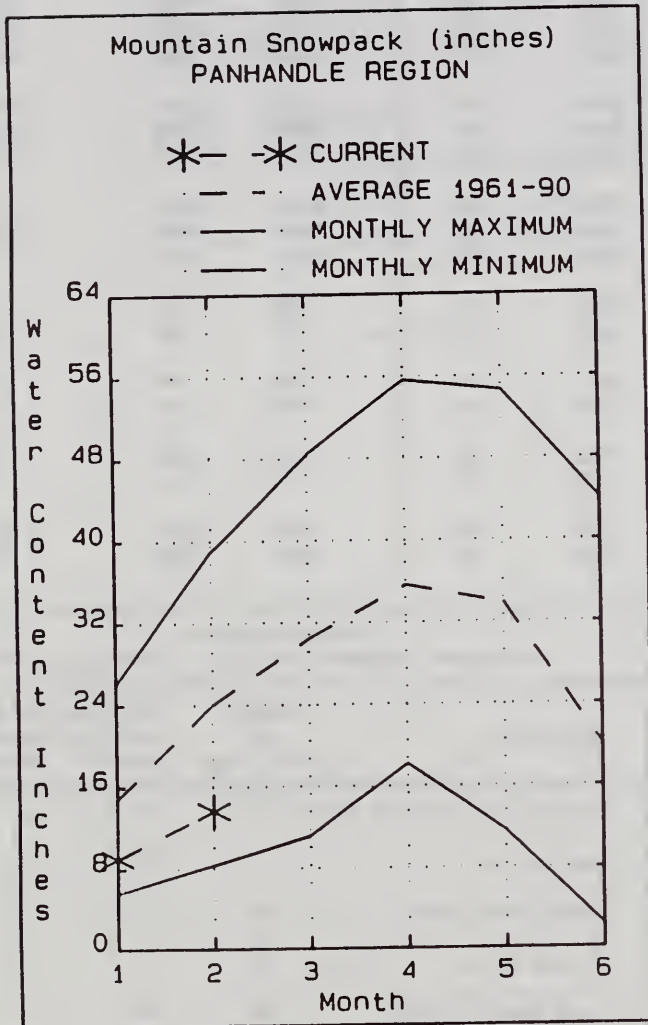
Winter streamflow continues to be well below normal in all areas of Idaho except the Henrys Fork and upper main stem of the Snake River where near average flows are reported. Basins north of the Salmon River had only about half of normal flow during the winter, a result of less-than-average precipitation. Elsewhere, 60 to 80% of average flows persisted. As a result, inflow to most major reservoirs was below normal during January, an unfortunate situation given the bleak outlook for the coming season's runoff. All areas of the state are forecast to receive well below normal runoff this year unless a significant change in the weather pattern occurs. With few exceptions, forecasts call for about 50 to 70% of average seasonal runoff volumes. Once again, the Wood River and Owyhee basins are forecast at less than half of normal. Meanwhile, upper Snake basins are forecast to produce flows 60 to 75% of average, the best in the state. Despite good carryover storage from last year in many reservoirs, the low streamflow projections indicate that overall water supplies could be marginal for some users this year.

## RECREATION OUTLOOK

Low snowpacks in Idaho's central and southern mountains could mean an earlier than normal runoff and a short high water period. River runners on the Salmon River can probably expect adequate flows throughout the boating season. Middle Fork users may need to use downstream launch points as the water drops earlier than normal. Idaho's southwest desert rivers -- the Jarbidge, Bruneau, and Owyhee -- will most likely have an early and short boating season. Northern Idaho streams should have an adequate boating season, but peak flows will be somewhat diminished and the high water period should be shorter than normal. Payette river flows should hold up quite well due to excellent storage in Cascade and Deadwood reservoirs. Reservoir users in southern Idaho should expect earlier than normal drawdowns as this important resource is tapped to meet irrigation demands.

## PANHANDLE REGION

FEBRUARY 1, 1994



### WATER SUPPLY OUTLOOK

January snowfall was well below normal in the Panhandle region. SNOTEL sites in the basin reported only 65% of normal precipitation for the month, bringing the year to date total to only 62%. Snowpacks are well below normal, generally ranging from 60 to 70% of average. Consequently, streamflow forecasts have dropped from the figures reported last month, and now call for only 60 to 65% of normal flow. Coeur d'Alene and Pend Oreille Lakes are reporting below normal storage, while Priest Lake is near normal. Water users in Idaho's Panhandle region should be prepared for potentially low water supplies this spring and summer.



PANHANDLE REGION  
Streamflow Forecasts - February 1, 1994

<===== Drier ===== Future Conditions ===== Wetter =====>

Forecast Point	Forecast Period	=====		Chance Of Exceeding *		=====		30-Yr Avg. (1000AF)
		90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	
KOOTENAI at Leonia (1,2)	APR-JUN	3000	3920	4330	76	4740	5660	5701
	APR-JUL	3790	4920	5440	76	5960	7090	7199
	APR-SEP	4350	5660	6250	76	6840	8150	8275
CLARK FK at Whitehorse Rpd (1,2)	APR-JUN	3500	5510	6430	64	7350	9360	10050
	APR-JUL	4070	6440	7510	64	8580	10900	11730
	APR-SEP	4470	7070	8250	64	9430	12000	12910
PEND OREILLE LAKE inflow (1,2)	APR-JUN	3450	5930	7060	62	8190	10700	11390
	APR-JUL	4320	6950	8140	62	9330	12000	13150
	APR-SEP	4710	7580	8890	62	10200	13100	14370
PRIEST nr Priest River (1,2)	APR-JUL	320	510	595	73	680	870	814
	APR-SEP	345	545	635	73	725	925	868
COEUR D'ALENE at Enaville	APR-JUL	295	410	490	64	570	695	770
	APR-SEP	138	440	520	64	600	920	809
ST.JOE at Calder	APR-JUL	515	650	745	64	840	1050	1169
	APR-SEP	445	685	780	63	875	1160	1237
SPOKANE near Post Falls (2)	APR-JUL	930	1320	1580	60	1840	2230	2633
	APR-SEP	1060	1450	1720	63	1990	3220	2730

PANHANDLE REGION  
Reservoir Storage (1000 AF) - End of January

PANHANDLE REGION  
Watershed Snowpack Analysis - February 1, 1994

Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
HUNGRY HORSE	3451.0	1136.0	1103.0	2362.0	Kootenai ab Bonners Ferry	9	81	67
FLATHEAD LAKE	1791.0	826.9	749.2	1095.0	Moyie River	1	71	47
NOXON RAPIDS	335.0	320.6	286.6	314.2	Clark Fork River	46	76	63
PEND OREILLE	1561.3	553.6	536.9	823.1	Priest River	3	75	68
COEUR D'ALENE	238.5	53.5	48.0	127.8	Pend Oreille River	66	81	71
PRIEST LAKE	119.3	55.5	57.0	53.4	Rathdrum Creek	3	66	87
					Hayden Lake	0	0	0
					Coeur d'Alene River	5	67	61
					St. Joe River	2	65	57
					Spokane River	10	66	65
					Palouse River	1	55	60

\* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

The average is computed for the 1961-1990 base period.

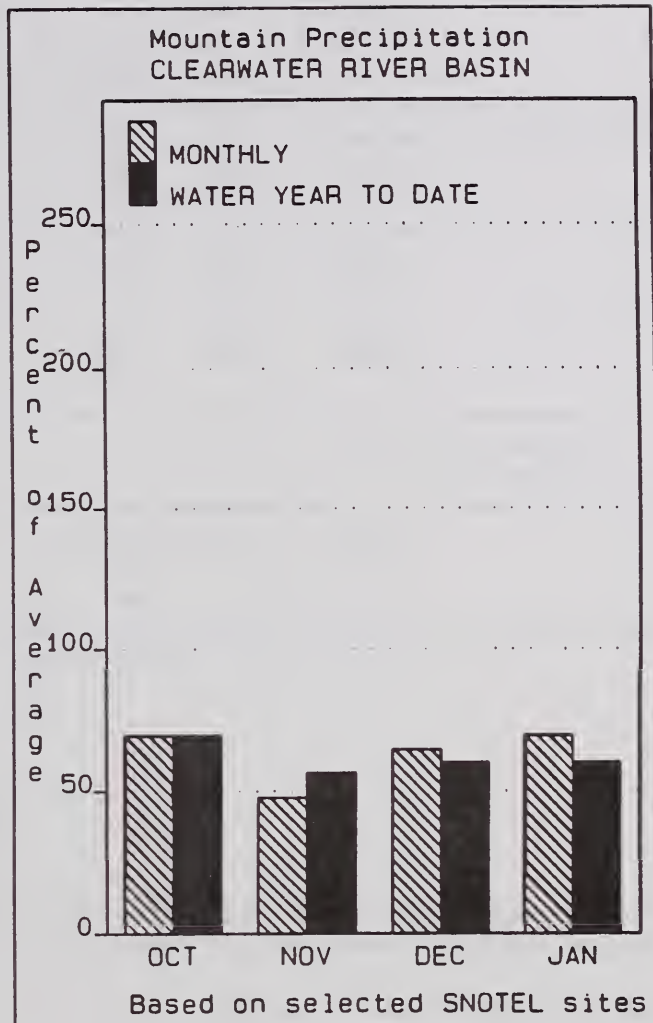
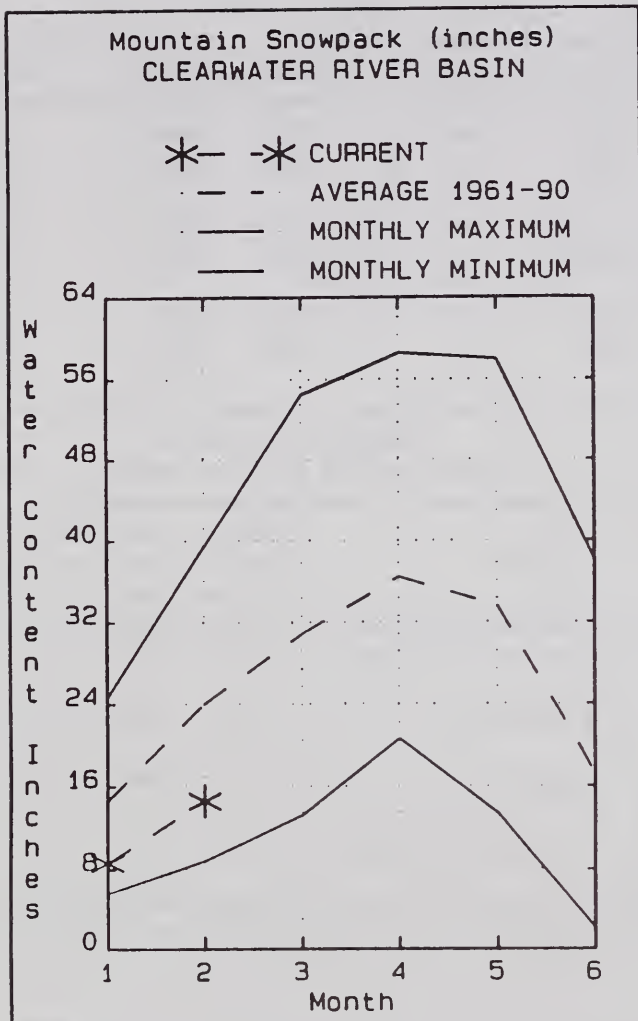
(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.

(2) - The value is natural flow - actual flow may be affected by upstream water management.



## CLEARWATER RIVER BASIN

FEBRUARY 1, 1994



### WATER SUPPLY OUTLOOK

Snowfall was disappointing in the Clearwater basin during January; SNOTEL sites reported only 69% of normal mountain precipitation for the month. Snowpack figures have not changed much since last month. Watersheds are still reporting only 60 to 70% of normal snowpack for February 1. Streamflow volumes are expected to be low this spring and summer at 60 to 65% of average flow. Storage in Dworshak reservoir is above normal for this time of year, and may help buffer downstream water supplies. Water users in the Clearwater basin should be prepared for potentially low water supplies this spring and summer.

CLEARWATER RIVER BASIN  
Streamflow Forecasts - February 1, 1994

Forecast Point	Forecast Period	<<===== Drier ===== Future Conditions ===== Wetter =====>>						30-Yr Avg. (1000AF)
		===== Chance Of Exceeding * =====						
		90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF) (% AVG.)		30% (1000AF)	10% (1000AF)	
=====								
DWORSHAK Reservoir Inflow (2)	APR-JUL	620	1400	1750	65	1860	2880	2692
	APR-SEP	1180	1520	1760	61	2000	2340	2866
CLEARWATER at Orofino (1)	APR-JUL	1350	2560	3110	66	3660	4870	4718
	APR-SEP	1420	2700	3280	66	3860	5140	4976
CLEARWATER at Spalding (1,2)	APR-JUL	2050	4100	5030	66	5960	8010	7618
	APR-SEP	2160	4330	5310	66	6290	8460	8052

CLEARWATER RIVER BASIN Reservoir Storage (1000 AF) - End of January					CLEARWATER RIVER BASIN Watershed Snowpack Analysis - February 1, 1994			
Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
DWORSHAK	3459.0	2544.2	2563.6	2198.2	North Fork Clearwater	12	67	58
					Lochsa River	4	76	63
					Selway River	5	81	72
					Clearwater Basin Total	20	70	61

\* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

The average is computed for the 1961-1990 base period.

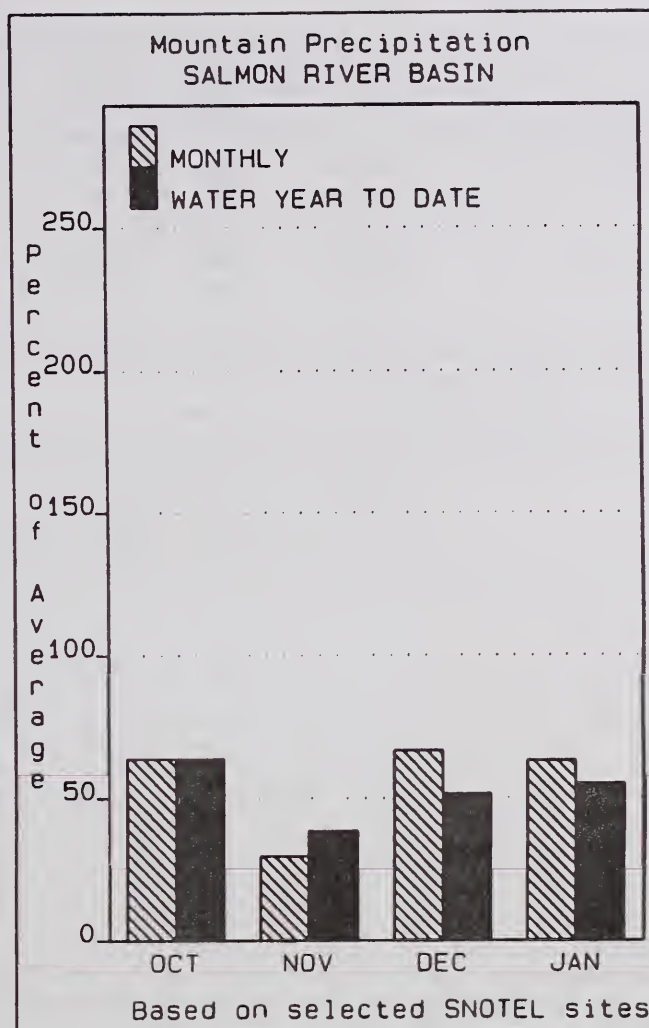
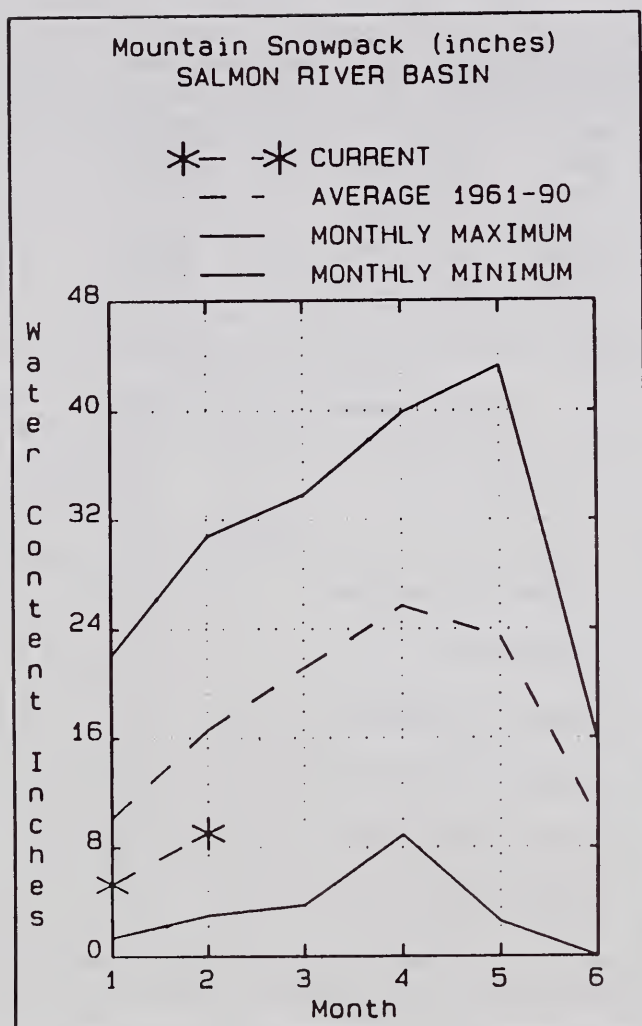
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## SALMON RIVER BASIN

FEBRUARY 1, 1994



### WATER SUPPLY OUTLOOK

Dry conditions during January did little to change snowpack conditions during the month: snowpacks are only about half of what they should be at this time. SNOTEL sites in the basin reported only 63% of normal precipitation for the month of January, bringing the year to date total to 55% of average. Streamflow forecasts have dropped slightly from last month and now call for 65% of average for Salmon River at White Bird and 67% of average for Salmon River at Salmon. Water users in the basin should prepare for lower than normal peak flows and an early recession to low flow conditions. River runners can expect adequate flows for boating the Middle Fork and main Salmon rivers but should be prepared for low flow conditions.

SALMON RIVER BASIN  
Streamflow Forecasts - February 1, 1994

		<<===== Drier ===== Future Conditions ===== Wetter =====>>						
Forecast Point	Forecast Period	Chance Of Exceeding *						30-Yr Avg. (1000AF)
		90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF) (% AVG.)		30% (1000AF)	10% (1000AF)	
SALMON at Salmon (1)	APR-JUL	205	465	580	67	695	955	869
	APR-SEP	240	545	680	67	815	1120	1019
SALMON at White Bird (1)	APR-JUL	1800	3220	3860	65	4500	5920	5956
	APR-SEP	2000	3570	4280	65	4990	6560	6602

SALMON RIVER BASIN  
Reservoir Storage (1000 AF) - End of January

SALMON RIVER BASIN  
Watershed Snowpack Analysis - February 1, 1994

Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
		Year	Year					
					Salmon River ab Salmon	8	47	44
					Lemhi River	4	81	62
					Middle Fork Salmon River	3	52	48
					South Fork Salmon River	3	53	52
					Little Salmon River	4	59	65
					Salmon Basin Total	23	58	55

\* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

The average is computed for the 1961-1990 base period.

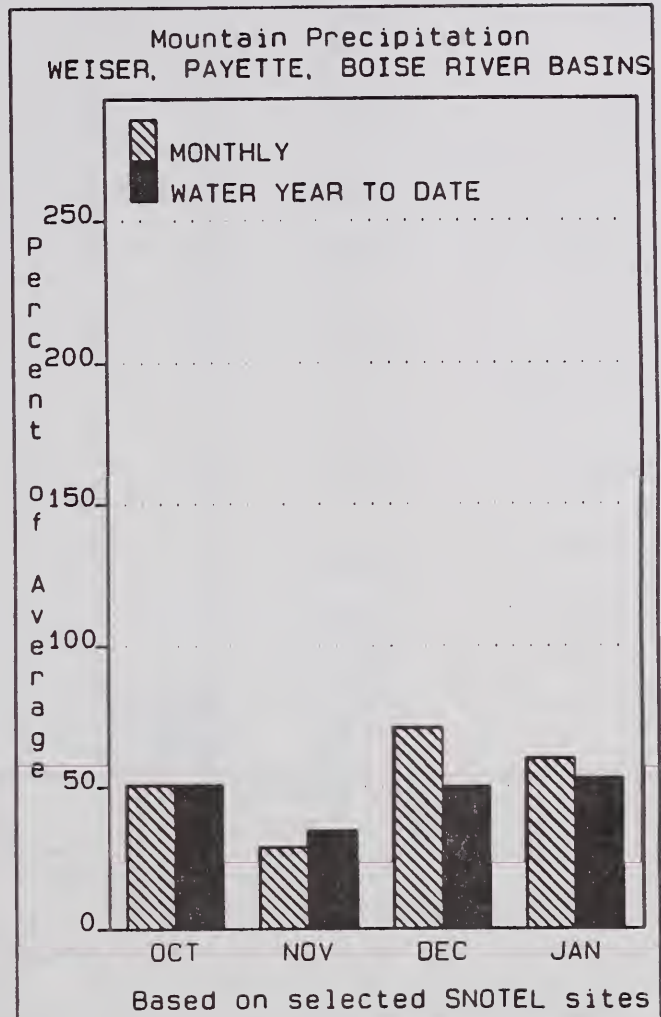
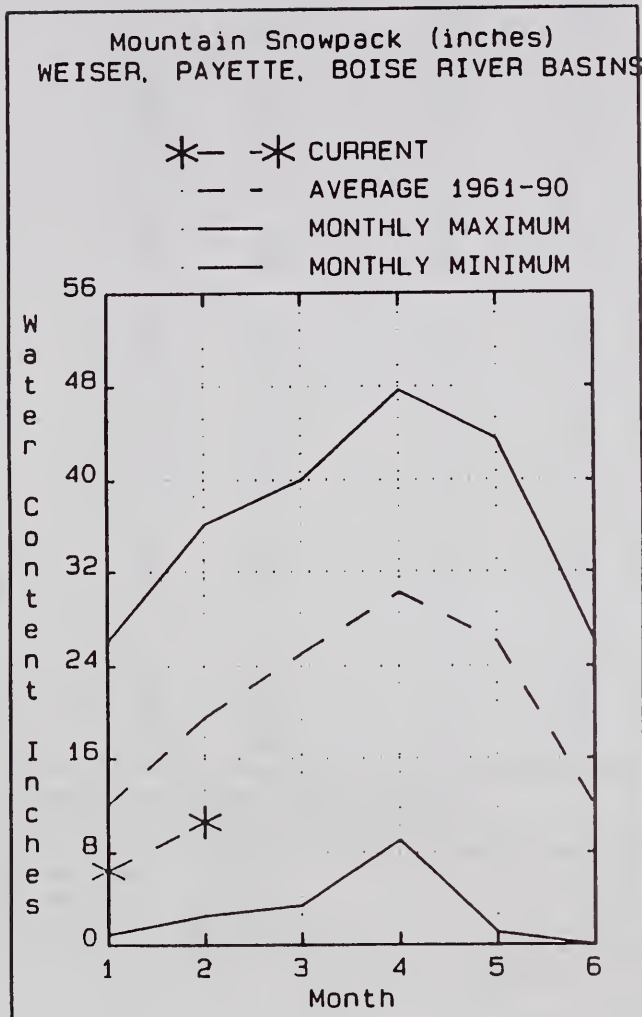
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## WEISER, PAYETTE, BOISE RIVER BASINS

FEBRUARY 1, 1994



### WATER SUPPLY OUTLOOK

Another dry month has kept snowpack conditions well below normal. SNOTEL sites in the west central mountains reported only 60% of average January precipitation, keeping snowpacks in the 50 to 65% of normal range. Streamflow forecasts continue to look bleak: the Weiser, Boise, and Payette rivers are all expected to produce only 50 to 60% of normal flows. The good news is reservoir carryover storage -- the three major reservoirs in the Boise basin report a combined usable storage of 658,000 acre-feet, the best February 1 level since 1987. Storage in Deadwood and Cascade reservoirs is even better, with 114% of average storage for February 1. With reservoirs acting as a buffer against the expected low streamflows, water users may just get by with enough water this year. For more specific information, keep in touch with your local irrigation district as the season progresses.

WEISER, PAYETTE, BOISE RIVER BASINS  
Streamflow Forecasts - February 1, 1994

Forecast Point	Forecast Period	<<===== Drier ===== Future Conditions ===== Wetter =====>						30-Yr Avg. (1000AF)
		===== Chance Of Exceeding * =====						
		90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	
WEISER nr Weiser (1)	APR-JUL	4.0	122	195	51	270	430	386
	APR-SEP	21	132	210	51	290	460	415
SF PAYETTE at Lowman	APR-JUL	144	205	245	57	285	345	432
	APR-SEP	186	250	295	60	340	405	488
DEADWOOD RESERVOIR Inflow (2)	APR-JUL	50	67	78	58	89	106	135
	APR-SEP	49	67	79	55	91	109	143
NF CASCADE nr Cascade (2)	APR-JUL	187	265	315	64	365	445	496
	APR-SEP	205	280	325	61	395	480	533
NF PAYETTE nr Banks (2)	APR-JUL	225	325	395	65	465	565	607
	APR-SEP	240	350	425	62	500	610	690
PAYETTE nr Horseshoe Bend (2)	APR-JUL	550	765	910	56	1060	1280	1618
	APR-SEP	420	825	985	56	1150	1540	1755
BOISE near Twin Springs	APR-JUL	240	315	370	59	425	500	631
	APR-SEP	240	325	385	56	445	530	686
SF BOISE at Anderson Rnch Dm (1,2)	APR-JUL	92	205	255	47	305	420	544
	APR-SEP	103	220	275	47	330	445	582
MORES CK nr Arrowrock Dam	APR-JUL	34	55	69	53	83	104	129
	APR-SEP	36	57	72	54	87	108	134
BOISE nr Boise (1,2)	APR-JUN	260	480	580	46	680	900	1264
	APR-JUL	215	585	710	50	835	1210	1421
	APR-SEP	310	600	730	48	860	1150	1535

WEISER, PAYETTE, BOISE RIVER BASINS  
Reservoir Storage (1000 AF) - End of January

WEISER, PAYETTE, BOISE RIVER BASINS  
Watershed Snowpack Analysis - February 1, 1994

Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
MANN CREEK	11.1	3.7	1.5	5.4	Mann Creek	1	52	72
CASCADE	703.2	458.3	333.9	409.4	Weiser River	3	57	67
DEADWOOD	161.9	101.2	53.1	79.5	North Fork Payette	8	56	62
ANDERSON RANCH	464.2	332.1	15.5	300.6	South Fork Payette	4	54	52
ARROWROCK	286.6	236.5	129.3	223.9	Payette Basin Total	13	56	60
LUCKY PEAK	293.2	89.2	54.3	117.4	Middle & North Fork Boise	6	50	52
LAKE LOWELL (DEER FLAT)	177.1	65.6	50.4	131.0	South Fork Boise River	6	44	48
					Mores Creek	4	55	64
					Boise Basin Total	12	50	54
					Canyon Creek	0	0	0

\* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

The average is computed for the 1961-1990 base period.

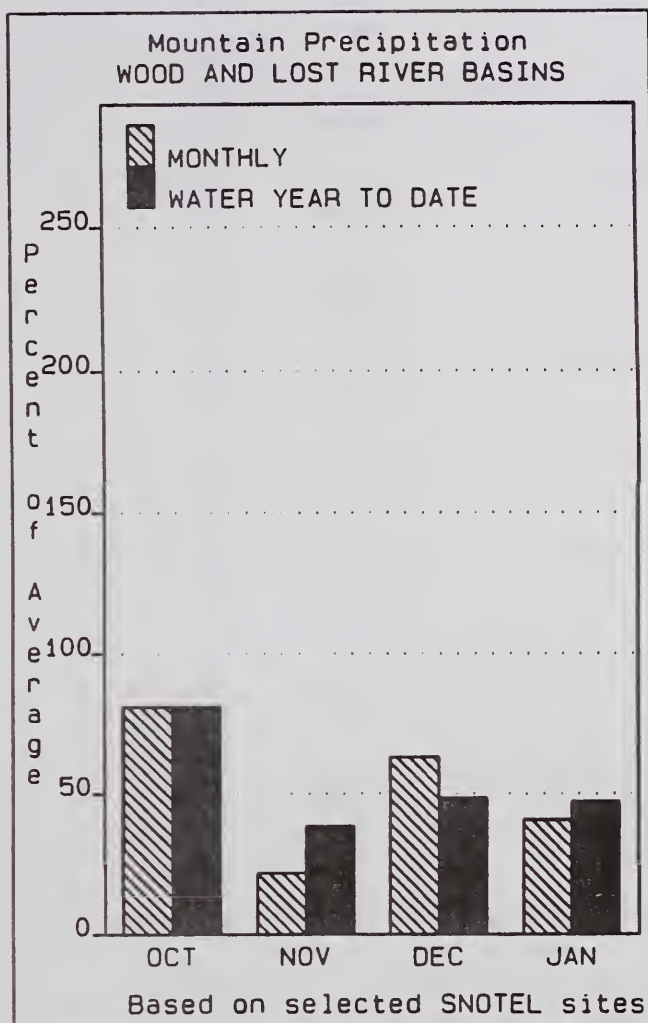
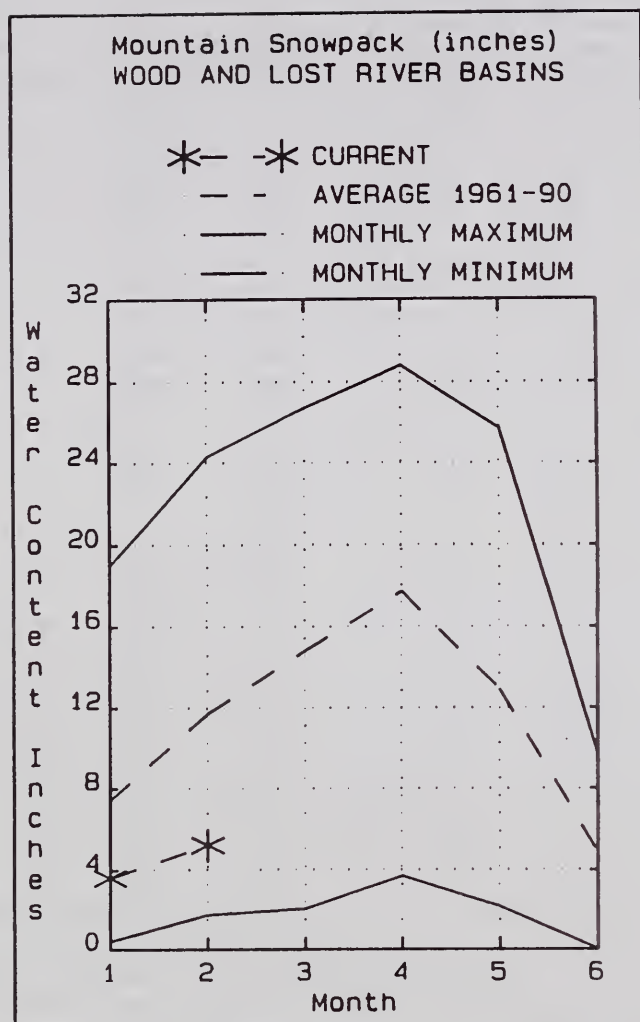
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## WOOD and LOST RIVER BASINS

FEBRUARY 1, 1994



### WATER SUPPLY OUTLOOK

The Wood and Lost river basins continue to be the focal point of Idaho's continuing drought. January mountain precipitation was only 41% of normal, and snowpacks in the area are the lowest in the state -- less than half of normal. Streamflow forecasts have dropped from last month and now range from only 32% at Big Wood River near Bellevue to 70% for both the Big Lost River at Howell and the Little Lost River near Howe. Regarding the relatively high forecast when compared with current snowpack, it is important to note that streamflow in the Little Lost River includes a significant groundwater component and is less dependent on snowpack alone than most streams. The saving grace for water users may be reservoir storage in Magic and Mackay, reporting just below average for February 1, the best carryover since 1987. Water users should be prepared for potentially short water supplies this year, and should keep in touch with their local irrigation districts for more specific information.

WOOD AND LOST RIVER BASINS  
Streamflow Forecasts - February 1, 1994

		<<===== Drier ===== Future Conditions ===== Wetter =====>>						
Forecast Point	Forecast Period	===== Chance Of Exceeding * =====						30-Yr Avg. (1000AF)
		90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF) (% AVG.)		30% (1000AF)	10% (1000AF)	
=====								
BIG WOOD at Hailey	APR-SEP	14.0		143	50		275	286
BIG WOOD nr Bellevue	APR-JUL	2.0	28	59	32	90	136	183
	APR-SEP	2.0	35	67	34	99	147	197
CAMAS CK nr Blaine	APR-JUL	8.0	41	63	62	85	118	102
	APR-SEP	9.0	42	64	62	86	119	103
BIG WOOD blw Magic Dam (2)	APR-JUL	18.0	85	131	45	177	245	294
	APR-SEP	37	92	139	45	186	320	309
LITTLE WOOD nr Carey	APR-JUL	10.0	29	42	46	55	74	92
	APR-SEP	17.0	37	50	51	64	83	99
BIG LOST RIVER at Howell	APR-JUN	55	81	99	70	117	143	141
	APR-JUL	66	102	127	70	152	189	181
	APR-SEP	73	114	142	69	170	210	206
BIG LOST blw Mackay Reservoir (2)	APR-JUL	42	70	88	59	106	134	150
	APR-SEP	60	89	109	60	129	158	182
LITTLE LOST blw Wet Creek	APR-JUL	13.0	18.0	21	68	24	29	31
	APR-SEP	18.0	24	28	72	32	38	39
LITTLE LOST nr Howe	APR-JUL	17.0	20	23	70	26	30	33
	APR-SEP	21	27	30	70	34	39	43

WOOD AND LOST RIVER BASINS Reservoir Storage (1000 AF) - End of January					WOOD AND LOST RIVER BASINS Watershed Snowpack Analysis - February 1, 1994			
Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
MAGIC	191.5	81.8	11.8	92.8	Big Wood ab Magic	8	42	43
LITTLE WOOD	30.0	22.7	9.8	15.5	Camas Creek	2	37	47
MACKAY	44.4	28.8	20.6	30.0	Big Wood Basin Total	10	41	44
					Little Wood River	3	36	44
					Fish Creek	0	0	0
					Big Lost River	5	38	42
					Little Lost River	3	42	44

\* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

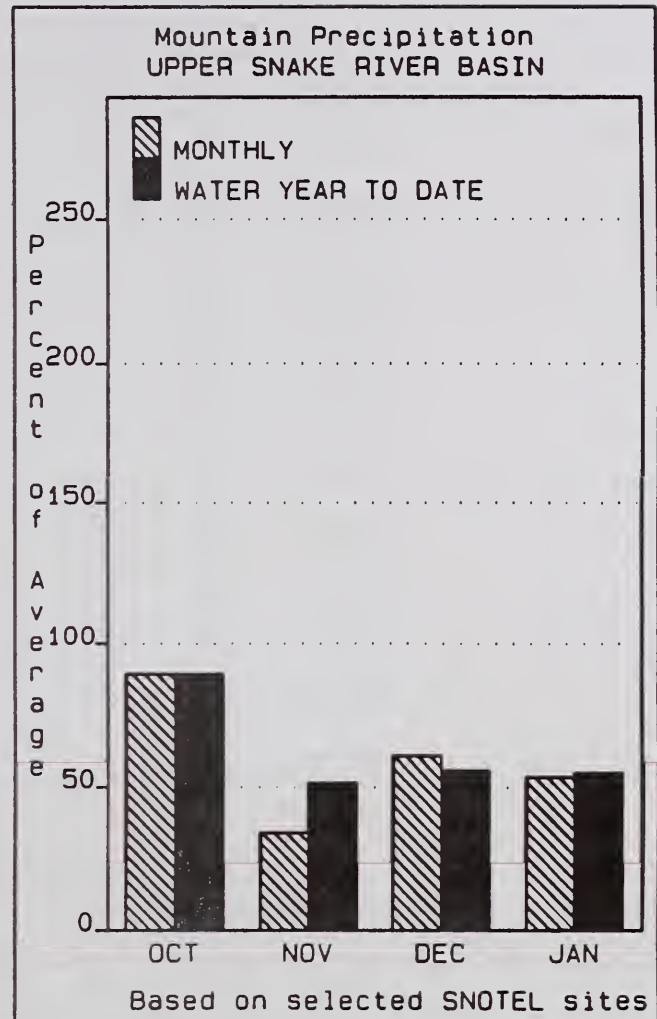
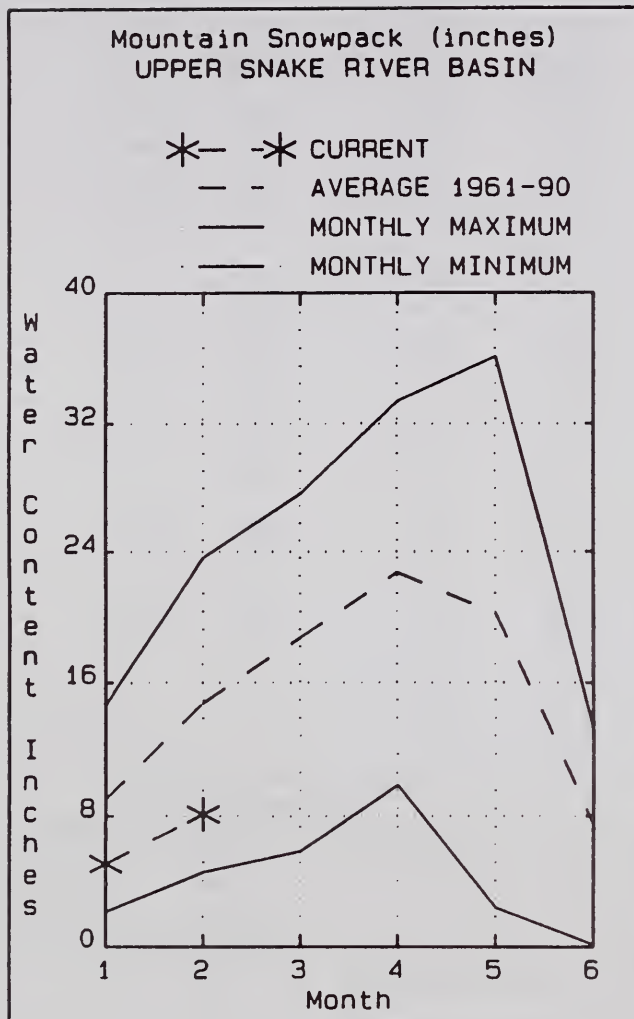
The average is computed for the 1961-1990 base period.

- (1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.  
(2) - The value is natural flow - actual flow may be affected by upstream water management.



## UPPER SNAKE RIVER BASIN

FEBRUARY 1, 1994



### WATER SUPPLY OUTLOOK

Water supply conditions in the upper Snake River basin are a mixture of good news and bad news. The bad news is the snowpack; watersheds in the basin are reporting just over half of normal snow for this time of year. Runoff forecasts reflect these low figures and call for only 60 to 75% of average flows. The good news is reservoir storage: the upper Snake system is currently 82% full, with Palisades and Jackson Lake reporting the best carryover storage since 1966! This stored water will be a key factor in this year's water supply. Irrigators and other water users should have adequate water supplies this year, but reservoir carryover storage may suffer going into next year. For more specific information, water users should keep in touch with their local irrigation district.

UPPER SNAKE RIVER BASIN  
Streamflow Forecasts - February 1, 1994

Forecast Point	Forecast Period	<<===== Drier ===== Future Conditions ===== Wetter =====>>						30-Yr Avg. (1000AF)
		=====		Chance Of Exceeding *		=====		
		90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	
HENRYS FORK nr Ashton	APR-JUL	280	335	375	69	415	470	544
	APR-SEP	400	465	510	70	555	620	730
HENRYS FORK nr Rexburg	APR-JUL	650	800	900	73	1000	1150	1228
	APR-SEP	730	955	1070	69	1190	1440	1551
FALLS RIVER nr Squirrel	APR-JUL	198	230	255	70	280	310	364
	APR-SEP	220	260	285	66	310	350	432
TETON abv S Leigh Ck nr Driggs	APR-JUL	76	102	120	78	138	164	153
	APR-SEP	103	134	156	78	178	210	199
TETON nr St. Anthony	APR-JUL	175	235	275	73	315	375	375
	APR-SEP	104	275	320	70	365	395	454
SNAKE nr Moran (1,2)	APR-SEP	410	550	610	70	670	810	869
SALT RIVER abv Reservoir nr Etna	APR-SEP	184	235	280	70	325	380	400
SNAKE RIVER nr Heise	APR-JUL	1550	1940	2200	64	2460	2850	3451
	APR-SEP	1720	2170	2470	61	2770	3220	4048
SNAKE RIVER nr Blackfoot	APR-JUL	1760	2280	2700	63	3120	3470	4281
	APR-SEP	2240	2920	3380	64	3840	4520	5268
PORTNEUF at Topaz	MAR-JUL	26	39	48	56	57	70	86
	MAR-SEP	35	51	62	58	73	89	107
AMERICAN FALLS RESV Inflow	APR-JUL	31		1230	40		2610	3066

UPPER SNAKE RIVER BASIN  
Reservoir Storage (1000 AF) - End of January

UPPER SNAKE RIVER BASIN  
Watershed Snowpack Analysis - February 1, 1994

Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
HENRYS LAKE	90.4	86.0	57.9	78.7	Camas-Beaver Creeks	4	28	37
ISLAND PARK	135.2	122.2	69.1	100.7	Henrys Fork River	10	55	59
GRASSY LAKE	15.2	13.4	12.7	10.8	Teton River	8	61	62
JACKSON LAKE	847.0	622.7	153.6	479.6	Snake above Jackson Lake	13	65	60
PALISADES	1400.0	1293.5	467.9	1043.6	Gros Ventre River	3	69	57
RIRIE	80.5	42.4	21.5	39.1	Hoback River	6	57	46
BLACKFOOT	348.7	187.8	44.0	235.8	Greys River	5	62	50
AMERICAN FALLS	1672.6	1380.4	909.9	1141.5	Salt River	5	72	61
					Snake above Palisades	32	64	56
					Willow Creek	7	50	59
					Blackfoot River	4	56	54
					Portneuf River	5	44	52
					Snake abv American Falls	45	60	56

\* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

The average is computed for the 1961-1990 base period.

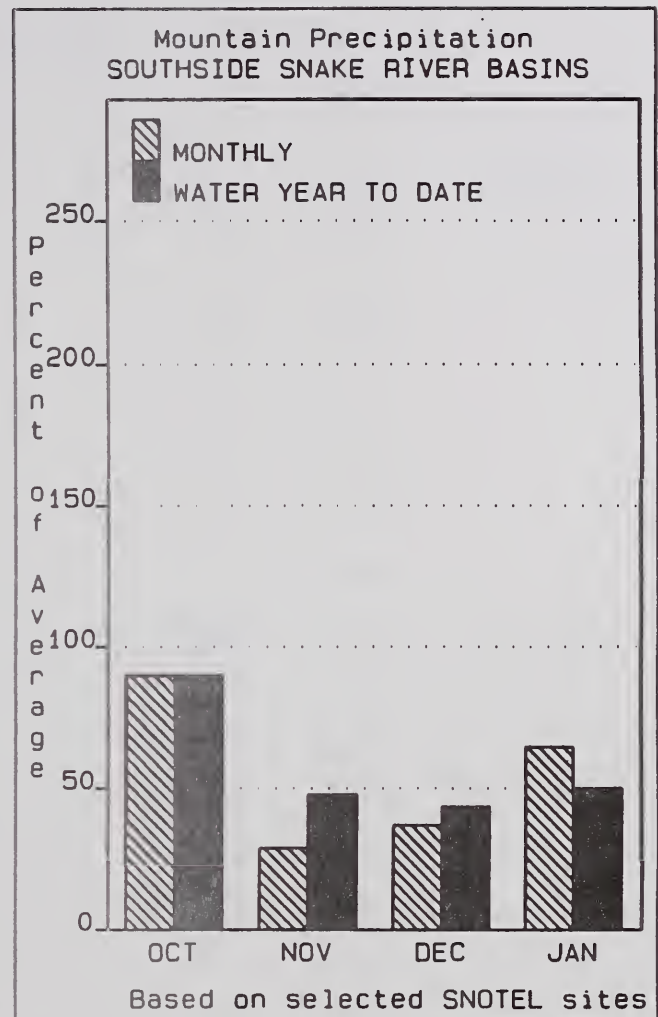
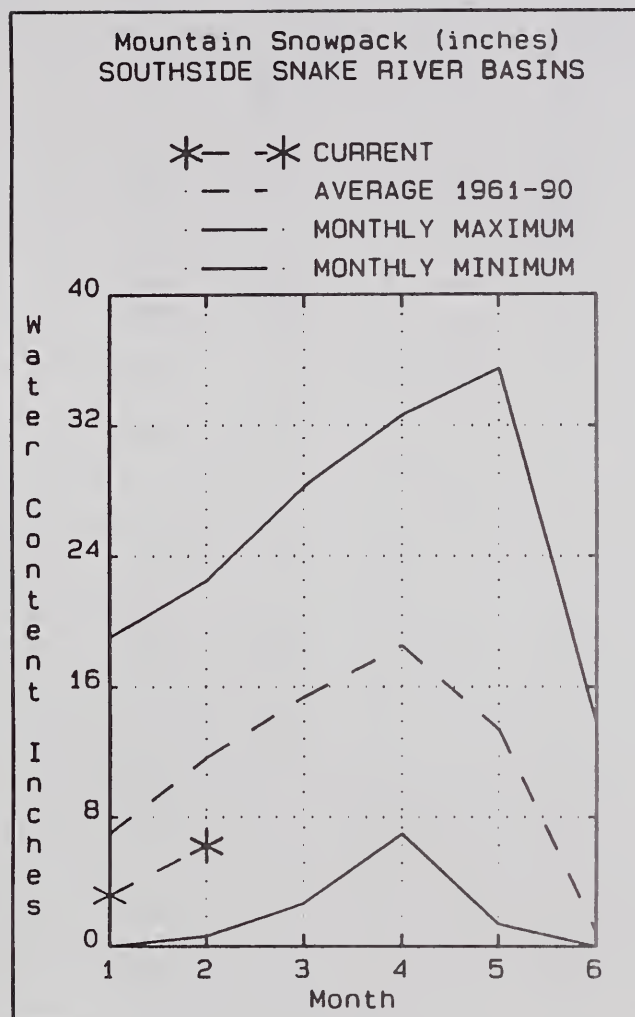
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(2) - The value is natural flow - actual flow may be affected by upstream water management.



## SOUTHSIDE SNAKE RIVER BASINS

FEBRUARY 1, 1994



### WATER SUPPLY OUTLOOK

January precipitation was only 65% of average along the southern edge of the state. Consequently, snowpacks have not changed much since the January 1 report. Basin snowpacks currently range from 40% of average in the Owyhee basin to 59% of average in the Salmon Falls Creek basin. Streamflow forecasts reflect these low snowpack figures and range from 38% of average for Owyhee Reservoir inflow to 57% of average for Oakley Reservoir inflow. Due to good runoff last year, reservoir storage is the best in several years, with Owyhee reporting 95% of normal storage for this time of year and Salmon Falls Creek reporting 89%. This carryover storage should help offset potential water shortages caused by the low snowpack conditions. Water users without the benefit of stored irrigation water should plan for another water short year. Water users should keep in touch with their local irrigation district for more specific information.

SOUTHSIDE SNAKE RIVER BASINS  
Streamflow Forecasts - February 1, 1994

Forecast Point	Forecast Period	<<===== Drier ===== Future Conditions ===== Wetter =====>>						30-Yr Avg. (1000AF)
		===== Chance Of Exceeding * =====						
		90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	
OAKLEY RESERVOIR Inflow	MAR-JUL	7.0	15.0	19.0	57	27	32	34
	MAR-SEP	7.0	15.0	21	57	28	35	37
SALMON FALLS CK nr San Jacinto	MAR-JUN	8.0	29	44	51	59	80	86
	MAR-JUL	6.0	30	46	51	62	86	91
	MAR-SEP	11.0	32	49	51	66	88	96
BRUNEAU nr Hot Spring	MAR-JUL	9.0	71	109	46	148	205	235
	MAR-SEP	10.0	73	113	46	154	220	246
OWYHEE nr Gold Ck (2)	MAR-JUL	1.0	7.0	14.0	44	21	38	32
OWYHEE nr Owyhee (2)	APR-JUL	11.0	21	39	45	57	84	86
SF OWYHEE nr Whiterock	APR-JUL	1.0	4.0	17.0	22	41	75	78
OWYHEE nr Rome	FEB-JUL	6.0	132	255	41	380	560	622
OWYHEE RESERVOIR inflow (1,2)	FEB-JUL	7.0	119	250	38	380	670	656
	APR-SEP	4.0	19.0	160	38	300	610	418
SUCCOR CK nr Jordan Valley	FEB-JUL	0.0	2.8	7.6	47	12.4	19.5	16.2
SNAKE RIVER at King Hill	APR-JUL	435		1610	56		2780	2896
SNAKE RIVER near Murphy	APR-JUL	385		1630	55		2860	2980
SNAKE RIVER at Weiser	APR-JUL	55		2540	46		5410	5465
SNAKE RIVER at Hells Canyon Dam	APR-JUL	61		2860	47		5880	6129
SNAKE bl Lower Granite Dam (1,2)	APR-JUL	3890	10300	13200	61	16100	22500	21650

SOUTHSIDE SNAKE RIVER BASINS  
Reservoir Storage (1000 AF) - End of January

SOUTHSIDE SNAKE RIVER BASINS  
Watershed Snowpack Analysis - February 1, 1994

Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
OAKLEY	77.4	12.9	8.1	26.5	Raft River	1	29	48
SALMON FALLS	182.6	43.8	13.9	49.3	Goose-Trapper Creeks	2	32	45
WILDHORSE RESERVOIR	71.5	33.6	4.7	31.5	Salmon Falls Creek	5	47	59
OWYHEE	715.0	441.0	59.9	464.0	Bruneau River	8	35	47
BROWNLEE	1419.3	1292.5	1242.5	1109.4	Owyhee Basin Total	19	23	40

\* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

The average is computed for the 1961-1990 base period.

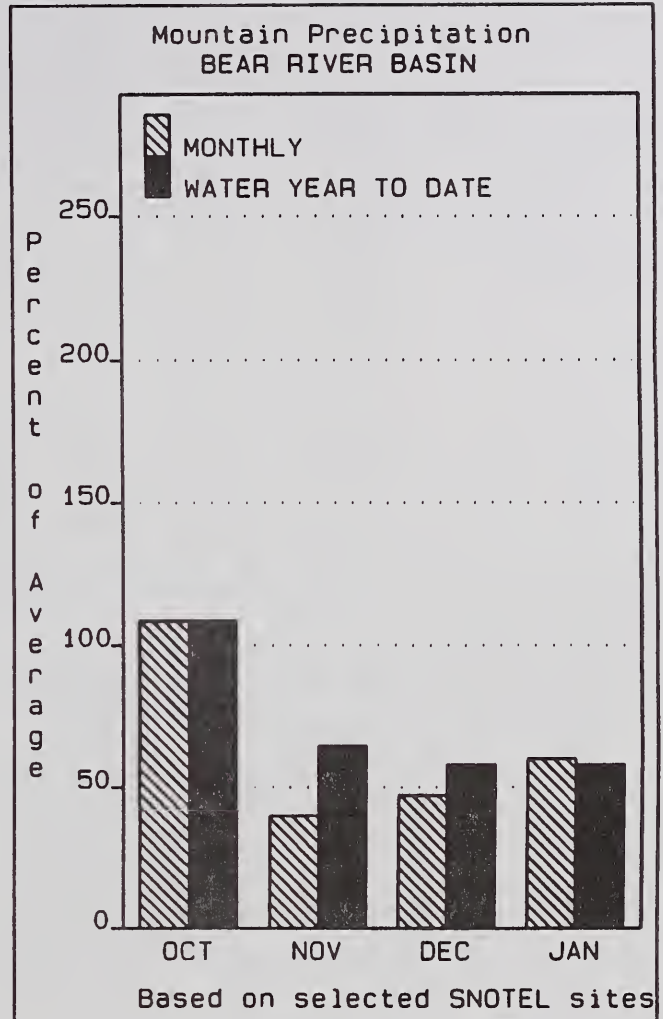
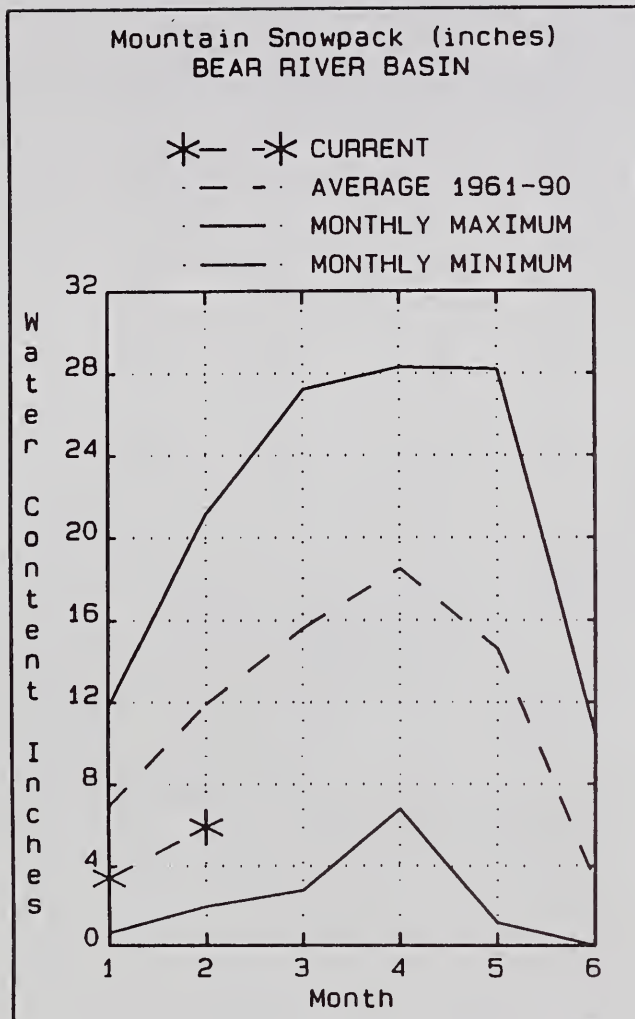
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(2) - The value is natural flow - actual flow may be affected by upstream water management.



## BEAR RIVER BASIN

FEBRUARY 1, 1994



### WATER SUPPLY OUTLOOK

Precipitation in the Bear River Basin during January was only 60% of average, bringing the water year to date precipitation to 58% of average. Snowpack in the region is only about half of average for this time of year. As expected, spring streamflow forecasts for the Bear River basin are well below normal, ranging from 55 to 64% of average volume. Bear Lake is reporting just over half of average storage at 37% full, while Montpelier Creek Reservoir is currently well above its average at 65% full. Bear Lake area water users should be prepared for potentially short water supplies and should keep in touch with their local irrigation district for more specific information.

BEAR RIVER BASIN  
Streamflow Forecasts - February 1, 1994

Forecast Point	Forecast Period	<<===== Drier ===== Future Conditions ===== Wetter =====>>						30-Yr Avg (1000AF)
		Chance Of Exceeding *						
		90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	
BEAR RIVER nr Randolph	APR-JUL	4.0	40	81	62	122	182	131
SMITHS FORK nr Border, WY	APR-JUL	30	48	61	60	74	92	102
	APR-SEP	34	55	70	59	85	106	118
THOMAS FORK nr WY-ID Stateline	APR-JUL	5.0	14.0	20	61	26	35	33
	APR-SEP	6.0	16.0	22	61	29	38	36
BEAR RIVER blw Stewart Dam (2)	APR-SEP	62	129	175	59	220	290	298
MONTPELIER CREEK nr Montpelier	APR-JUL	1.5	4.6	6.7	55	8.8	11.9	12.2
	APR-SEP	1.8	5.4	7.8	55	10.2	13.8	14.2
CUB RIVER nr Preston	APR-JUL	16.0	24	30	64	36	44	47

BEAR RIVER BASIN  
Reservoir Storage (1000 AF) - End of January

BEAR RIVER BASIN  
Watershed Snowpack Analysis - February 1, 1994

Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
WOODRUFF NARROWS		NO REPORT			Smiths & Thomas Forks	3	56	48
WOODRUFF CREEK	4.0	2.2	1.9	---	Bear River ab WY-ID line	8	50	50
BEAR LAKE	1421.0	525.1	215.5	987.6	Montpelier Creek	2	53	44
MONTPELIER CREEK	4.0	2.6	0.8	1.6	Mink Creek	1	59	55
					Cub River	1	64	68
					Bear River ab ID-UT line	15	54	52
					Malad River	1	54	61

\* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

The average is computed for the 1961-1990 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.

(2) - The value is natural flow - actual flow may be affected by upstream water management.



# Streamflow Adjustment List For All Forecasts Published In Idaho Basin Outlook Report

Streamflow forecasts are projections of runoff volumes that would have occurred naturally without influences from upstream reservoirs or diversions. These values are referred to as natural or adjusted flows. To make these adjustments, changes in reservoir storage, diversions, and interbasin transfers are added or subtracted from the observed (actual) streamflow volumes. The following list documents the adjustments made to each forecast point in this report.

## Panhandle River Basins

KOOTENAI R AT LEONIA, ID  
+ LAKE KOOCANUSA (STORAGE CHANGE)  
CLARK FORK AT WHITEHORSE RAPIDS, ID  
+ HUNGRY HORSE (STORAGE CHANGE)  
+ FLATHEAD LAKE (STORAGE CHANGE)  
+ NOXON RAPIDS RESV (STORAGE CHANGE)  
PEND OREILLE LAKE INFLOW, ID  
+ PEND OREILLE R AT NEWPORT, WA  
+ HUNGRY HORSE (STORAGE CHANGE)  
+ FLATHEAD LAKE (STORAGE CHANGE)  
+ NOXON RAPIDS (STORAGE CHANGE)  
+ PEND OREILLE LAKE (STORAGE CHANGE)  
PRIEST R NR PRIEST R, ID  
+ PRIEST LAKE (STORAGE CHANGE)  
COEUR D'ALENE R AT ENAVILLE, ID - No Corrections  
ST. JOE R AT CALDER, ID - No Corrections  
SPOKANE R NR POST FALLS, ID  
+ COEUR D'ALENE LAKE (STORAGE CHANGE)  
+ RATHDRUM PRAIRIE CANAL AT HEUTTER, ID

## Clearwater River Basin

DWORSHAK RESERVOIR INFLOW, ID  
+ CLEARWATER R NR PECK, ID  
+ DWORSHAK RESV (STORAGE CHANGE)  
- CLEARWATER R AT OROFINO, ID  
CLEARWATER R AT OROFINO, ID - No Corrections  
CLEARWATER R AT SPALDING, ID  
+ DWORSHAK RESV (STORAGE CHANGE)

## Salmon River Basin

SALMON R AT SALMON, ID - No Corrections  
SALMON R AT WHITE BIRD, ID - No Corrections

## Weiser, Payette, Boise River Basins

WEISER R NR WEISER, ID - No Corrections  
SF PAYETTE R AT LOWMAN, ID - No Corrections  
DEADWOOD RESERVOIR INFLOW, ID  
+ DEADWOOD R BLW DEADWOOD RESV NR LOWMAN  
+ DEADWOOD RESV (STORAGE CHANGE)  
NF PAYETTE R AT CASCADE, ID  
+ CASCADE RESV (STORAGE CHANGE)  
NF PAYETTE R NR BANKS, ID  
+ CASCADE RESV (STORAGE CHANGE)  
PAYETTE R NR HORSESHOE BEND, ID  
+ DEADWOOD RESV (STORAGE CHANGE)  
+ CASCADE RESV (STORAGE CHANGE)  
BOISE R NR TWIN SPRINGS, ID - No Corrections  
SF BOISE R AT ANDERSON RANCH DAM, ID  
+ ANDERSON RANCH RESV (STORAGE CHANGE)  
MORES CK NR ARROWROCK DAM, ID - No Corrections  
BOISE R NR BOISE, ID  
+ ANDERSON RANCH RESV (STORAGE CHANGE)  
+ ARROWROCK RESV (STORAGE CHANGE)  
+ LUCKY PEAK RESV (STORAGE CHANGE)

## Wood and Lost River Basins

BIG WOOD R AT HAILEY, ID - No Corrections  
BIG WOOD R NR BELLEVUE, ID - No Corrections  
CAMAS CK NR BLAINE, ID - No Corrections  
BIG WOOD R BLW MAGIC DAM NR RICHFIELD, ID  
+ MAGIC RESV (STORAGE CHANGE)  
LITTLE WOOD R NR CAREY, ID  
+ LITTLE WOOD RESV (STORAGE CHANGE)  
BIG LOST R AT HOWELL RANCH NR CHILLY, ID - No Corrections  
Corrections  
BIG LOST R BLW MACKAY RESV NR MACKAY, ID  
+ MACKAY RESV (STORAGE CHANGE)  
LITTLE LOST R BLW WET CK NR HOWE, ID - No Corrections  
LITTLE LOST R NR HOWE, ID (Disc) - No Corrections

## Upper Snake River Basin

HENRYS FORK NR ASHTON, ID  
+ HENRYS LAKE (STORAGE CHANGE)  
+ ISLAND PARK RESV (STORAGE CHANGE)  
HENRYS FORK NR REXBURG, ID  
+ HENRYS LAKE (STORAGE CHANGE)  
+ ISLAND PARK RESV (STORAGE CHANGE)  
+ DIV FM HENRYS FK BTW ASHTON & ST. ANTHONY, ID  
+ DIV FM HENRYS FK BTW ST. ANTHONY & REXBURG, ID  
+ GRASSY LAKE (STORAGE CHANGE)  
FALLS R NR SQUIRREL, ID  
+ GRASSY LAKE (STORAGE CHANGE)  
TETON R ABV SO LEIGH CK NR DRIGGS, ID - No Corrections  
TETON R NR ST. ANTHONY, ID  
- CROSS CUT CANAL  
+ SUM OF DIVERSIONS ABV GAGE  
SNAKE R NR MORAN, WY  
+ JACKSON LAKE (STORAGE CHANGE)  
PALISADES RESERVOIR INFLOW, ID  
+ SNAKE R NR IRWIN, ID  
+ PALISADES RESV (STORAGE CHANGE)  
+ JACKSON LAKE (STORAGE CHANGE)  
SNAKE R NR HEISE, ID  
+ PALISADES RESV (STORAGE CHANGE)  
+ JACKSON LAKE (STORAGE CHANGE)  
SNAKE R NR BLACKFOOT, ID  
+ PALISADES RESV (STORAGE CHANGE)  
+ JACKSON LAKE (STORAGE CHANGE)  
+ JACKSON LAKE (STORAGE CHANGE)  
+ DIV FM SNAKE R BTW HEISE AND SHELLY GAGES  
+ DIV FM SNAKE R BTW SHELLY AND BLACKFT, ID  
PORTNEUF R AT TOPAZ, ID - No Corrections  
AMERICAN FALLS RESERVOIR INFLOW, ID  
+ SNAKE R AT NEELEY, ID  
+ AMERICAN FALLS (STORAGE CHANGE)  
+ PALISADES RESV (STORAGE CHANGE)  
+ JACKSON LAKE (STORAGE CHANGE)

Southside Snake River Basins

OAKLEY RESERVOIR INFLOW, ID	+ GOOSE CK ABV TRAPPER CK NR OAKLEY, ID
	+ TRAPPER CK NR OAKLEY, ID
	SALMON FALLS CK NR SAN JACINTO, NV - No Corrections
	BRUNEAU R NR HOT SPRINGS, ID - No Corrections
	OWYHEE R NR GOLD CK, NV
	+ WILDHORSE RESV (STORAGE CHANGE)
	OWYHEE R NR OWYHEE, NV
	+ WILDHORSE RESV (STORAGE CHANGE)
	OWYHEE R NR ROME, OR
	+ WILDHORSE RESV (STORAGE CHANGE)
OWYHEE RESERVOIR INFLOW, OR	+ JORDAN VALLEY RESV (STORAGE CHANGE)
	SUCCOR CK NR JORDAN VALLEY, OR - No Corrections
	SNAKE R - KING HILL, ID - No Corrections
	SNAKE R NR MURPHY, ID - No Corrections
	SNAKE R AT WEISER, ID - No Corrections
	SNAKE R AT HELLS CANYON DAM, ID
	+ BROWNLEE RESV (STORAGE CHANGE)
Bear River Basin	BEAR R NR RANDOLPH, UT
	+ SULPHUR CK RESV (STORAGE CHANGE)
	+ CHAPMAN CANAL DIVERSION
	+ WOODRUFF NARROWS RESV (STORAGE CHANGE)
	SMITHS FORK NR BORDER, WY - No Corrections
	THOMAS FORK NR WY-ID STATELINE - No Corrections
	BEAR R AT HARER, ID (Disc.)
	+ SULPHUR CK RESV (STORAGE CHANGE)
	+ CHAPMAN CANAL DIVERSION
	+ WOODRUFF NARROWS RESV (STORAGE CHANGE)
BEAR R BLW STEWART DAM, ID	+ SULPHUR CK RESV (STORAGE CHANGE)
	+ CHAPMAN CANAL DIVERSION
	+ WOODRUFF NARROWS RESV (STORAGE CHANGE)
	+ DINGLE INLET CANAL
	+ RAINBOW INLET CANAL
	MONTPELIER CK AT IRR WEIR NR MONTPELIER, ID
	+ MONTPELIER CK RESV (STORAGE CHANGE)
	CUB R NR PRESTON, ID - No Corrections

<u>RESERVOIR CAPACITY DEFINITIONS</u> - Different agencies use various definitions when reporting reservoir capacity and contents. Reservoir storage terms include dead, inactive, active, and surcharge storage. The table below lists these volumes for each reservoir in this report, and defines the storage volumes that SCS uses when reporting capacity and current reservoir storage. In most cases, SCS reports usable storage, which includes active and inactive storage.							
BASIN/ <u>RESERVOIR</u>	DEAD <u>STORAGE</u>	INACTIVE <u>STORAGE</u>	ACTIVE <u>STORAGE</u>	SURCHARGE <u>STORAGE</u>	SCS <u>CAPACITY</u>	SCS FIGURES <u>INCLUDE</u>	
<u>PANHANDLE REGION</u>							
HUNGRY HORSE	39.73	--	3451.00	--	3451.0	ACTIVE	
FLATHEAD LAKE	Unknown	--	1791.00	--	1971.0	ACTIVE	
NOXON RAPIDS	Unknown	--	335.00	--	335.0	ACTIVE	
PEND ORELLE	406.20	112.40	1042.70	--	1561.3	DEAD + INACTIVE + ACTIVE	
COEUR D'ALENE	--	13.50	225.00	--	238.5	INACTIVE + ACTIVE	
PRIEST LAKE	20.00	28.00	71.30	--	119.3	DEAD + INACTIVE + ACTIVE	
<u>CLEARWATER BASIN</u>							
DWORSHAK	--	1452.00	2007.00	--	3459.0	INACTIVE + ACTIVE	
<u>WEISER/BOISE/PAYETTE BASINS</u>							
MANN CREEK	1.61	0.24	11.10	--	11.1	ACTIVE	
CASCADE	--	50.00	653.20	--	703.2	INACTIVE + ACTIVE	
DEADWOOD	1.50	--	161.90	--	161.9	ACTIVE	
ANDERSON RANCH	29.00	41.00	423.18	--	464.2	INACTIVE + ACTIVE	
ARROWROCK	--	--	286.60	--	286.6	ACTIVE	
LUCKY PEAK	--	28.80	264.40	13.80	293.2	INACTIVE + ACTIVE	
LAKE LOWELL	--	8.00	169.10	--	177.1	INACTIVE + ACTIVE	
<u>WOOD/LOST BASINS</u>							
MAGIC	--	--	191.50	--	191.5	ACTIVE	
LITTLE WOOD	--	--	30.00	--	30.0	ACTIVE	
MACKAY	0.13	--	44.37	--	44.4	ACTIVE	
<u>UPPER SNAKE BASIN</u>							
HENRY'S LAKE	--	--	90.40	--	90.4	ACTIVE	
ISLAND PARK	0.40	--	127.30	7.90	135.2	ACTIVE + SURCHARGE	
GRASSY LAKE	--	--	15.18	--	15.2	ACTIVE	
JACKSON LAKE	--	--	847.00	--	847.0	ACTIVE	
PALISADES	44.10	155.50	1200.00	--	1400.0	DEAD + INACTIVE + ACTIVE	
RIRIE	4.00	6.00	80.54	10.00	80.5	ACTIVE	
BLACKFOOT	--	--	348.73	--	348.7	ACTIVE	
AMERICAN FALLS	--	--	1672.60	--	1672.6	ACTIVE	
<u>SOUTHSIDE SNAKE BASINS</u>							
OAKLEY	--	--	77.40	--	77.4	ACTIVE	
SALMON FALLS	48.00	--	182.65	--	182.6	ACTIVE	
WILDHORSE	--	--	71.50	--	71.5	ACTIVE	
OWYHEE	406.83	--	715.00	--	715.0	ACTIVE	
BROWNLEE	0.45	444.00	975.30	--	1419.3	INACTIVE + ACTIVE	
<u>BEAR RIVER BASIN</u>							
WOODRUFF NARROWS	--	1.50	57.30	--	57.3	ACTIVE	
WOODRUFF CREEK	--	4.00	4.00	--	4.0	ACTIVE	
BEAR LAKE	--	--	1421.00	--	1421.0	ACTIVE	
MONTPELIER CREEK	0.21	--	3.84	--	4.0	DEAD + ACTIVE	



## Interpreting Streamflow Forecasts

### Introduction

Each month, five forecasts are issued for each forecast point and each forecast period. Unless otherwise specified, all streamflow forecasts are for streamflow volumes that would occur naturally without any upstream influences. Water users need to know what the different forecasts represent if they are to use the information correctly when making operational decisions. The following is an explanation of each of the forecasts.

**Most Probable (50 Percent Chance of Exceeding) Forecast.** This forecast is the best estimate of streamflow volume that can be produced given current conditions and based on the outcome of similar past situations. There is a 50 percent chance that the streamflow volume will exceed this forecast value. There is a 50 percent chance that the streamflow volume will be less than this forecast value.

The most probable forecast will rarely be exactly right, due to errors resulting from future weather conditions and the forecast equation itself. This does not mean that users should not use the most probable forecast; it means that they need to evaluate existing circumstances and determine the amount of risk they are willing to take by accepting this forecast value.

### To Decrease the Chance of Having Too Little Water

If users want to make sure there is enough water available for their operations, they might determine that a 50 percent chance of the streamflow volume being lower than the most probable forecast is too much risk to take. To reduce the risk of not having enough water available during the forecast period, users can base their operational decisions on one of the forecasts with a greater chance of being exceeded (or possibly some point in-between). These include:

**70 Percent Chance of Exceeding Forecast.** There is a 70 percent chance that the streamflow volume will exceed this forecast value. There is a 30 percent chance the streamflow volume will be less than this forecast value.

**90 Percent Chance of Exceeding Forecast.** There is a 90 percent chance that the streamflow volume will exceed this forecast value. There is a 10 percent chance the streamflow volume will be less than this forecast value.

### To Decrease the Chance of Having Too Much Water

If users want to make sure they don't have too much water, they might determine that a 50 percent chance of the streamflow being higher than the most probable forecast is too much of a risk to take. To reduce the risk of having too much water available during the forecast period, users can base their operational decisions on one of the forecasts with a smaller chance of being exceeded. These include:

**30 Percent Chance of Exceeding Forecast.** There is a 30 percent chance that the streamflow volume will exceed this forecast value. There is a 70 percent chance the streamflow volume will be less than this forecast value.

**10 Percent Chance of Exceeding Forecast.** There is a 10 percent chance that the streamflow volume will exceed this forecast value. There is a 90 percent chance the streamflow volume will be less than this forecast value.

Using the forecasts - an example

**Using the Most Probable Forecast.** Using the example forecasts shown below, users can reasonably expect 36,000 acre-feet to flow past the gaging station on the Mary's River near Deeth between March 1 and July 31.

**Using the Higher Exceedance Forecasts.** If users anticipate a somewhat drier trend in the future (monthly and seasonal weather outlooks are available from the National Weather Service every two weeks), or if they are operating at a level where an unexpected shortage of water could cause problems, they might want to plan on receiving only 20,000 acre-feet (from the 70 percent chance of exceeding forecast). In seven out of ten years with similar conditions, streamflow volumes will exceed the 20,000 acre-foot forecast.

If users anticipate extremely dry conditions for the remainder of the season, or if they determine the risk of using the 70 percent chance of exceeding forecast is too great, then they might plan on receiving only 5000 acre-feet (from the 90 percent chance of exceeding forecast). Nine out of ten years with similar conditions, streamflow volumes will exceed the 5000 acre-foot forecast.

**Using the Lower Exceedance Forecasts.** If users expect wetter future conditions, or if the chance that five out of every ten years with similar conditions would produce streamflow volumes greater than 36,000 acre-feet was more than they would like to risk, they might plan on receiving 52,000 acre-feet (from the 30 percent chance of exceeding forecast) to minimize potential flooding problems. Three out of ten years with similar conditions, streamflows will exceed the 52,000 acre-foot forecast.

In years when users expect extremely wet conditions for the remainder of the season and the threat of severe flooding and downstream damage exists, they might choose to use the 76,000 acre-foot (10 percent chance of exceeding) forecast for their water management operations. Streamflow volumes will exceed this level only one year out of ten.

UPPER HUMBOLDT RIVER BASIN									
FORECAST POINT	FORECAST PERIOD	STREAMFLOW FORECASTS							
		← DRIER				FUTURE CONDITIONS			
		80 % (1000AF)(1000AF)	70 % (1000AF)(1000AF)	50 % (Most Probable) (1000AF) (% AVG)	30 % (1000AF)	10 % (1000AF)	25 YR (1000AF)	→ WETTER	
MARY'S RIVER nr Deeth	MAR-JUL APR-JUL	5.0 8.0	20.0 17.0	36 31	77 74	52 45	76 67	47 42	
LAMOILLE CREEK nr Lamolle	MAR-JUL APR-JUL	6.0 4.0	16.0 15.0	24 22	79 75	32 30	43 41	31 30	
NF HUMBOLDT RIVER at Devils Gate	MAR-JUL	6.0	12.0	43	73	74	121	59	

For more information concerning streamflow forecasting ask your local SCS field office for a copy of "A Field Office Guide for Interpreting Streamflow Forecasts".



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SOIL CONSERVATION SERVICE

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In addition to basin outlook reports, a Water Supply Forecast for the Western United States is published by the Soil Conservation Service and National Weather Service monthly, January through May. Reports may be obtained from the Soil Conservation Service, West National Technical Center, 511 Northwest Broadway, Room 248, Portland, OR 97209-3489.